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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/648,837

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Robert J. Sweeney

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3849

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7590

12/10/2007

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EXAMINER

FLORY, CHRISTOPHER A

ART UNIT

PAPER NUMBER

3762

MAIL DATE

DELIVERY MODE

12/10/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Interview Summary	Application No.	Applicant(s)	
	10/648,837	SWEENEY ET AL.	
	Examiner	Art Unit	
	Christopher A. Flory	3762	

All participants (applicant, applicant's representative, PTO personnel):

(1) Christopher A. Flory.

(3) Suneel Arora (42,267).

(2) George Manuel.

(4) Michael Horvath (57,235).

Date of Interview: 27 November 2007.

Type: a) ☒ Telephonic b) ☐ Video Conference
 c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☐ No.

If Yes, brief description: _____.

Claim(s) discussed: 1, 7, 18, 32 and 43.

Identification of prior art discussed: Siegel (5,062,841); Lew et al. (2003/0100822); Slepian (2002/0176849); Unger (6,123,923); Sutton (6,348,186); Altman.


Agreement with respect to the claims f) ☐ was reached. g) ☐ was not reached. h) ☒ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: See Continuation Sheet.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.


George Manuel
 Primary Examiner
 Examiner's signature, if required

Continuation of Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: The Examiners would like to thank Mssrs. Arora and Horvath for their constructive discussion regarding the applied references in order to advance prosecution of the instant application in a timely fashion. The Applicant defined the claimed invention as an apparatus and method to introduce microspheres into the myocardium, typically by insertion into the vascular structures of the heart, whereby the microspheres can travel through the vasculature and come to rest in a desired microcapillary bed for chronic placement. Ultrasound from an implanted sensor is then used to detect changes to physical properties of these microspheres that are responsive to one of a change in pH or an ion concentration.

It was briefly discussed that the Siegel device would be too large for placement in the myocardium, disclosing in column 12, lines 65-67 a housing 5cm by 2 cm, comprised of rigid material such as PMMA, in contrast to Applicant's claim 7 of a sphere less than or equal to 50 micrometers in diameter. It was also proposed that the rigid housing of Siegel would attenuate the instant ultrasound signal to an extent that would prevent accurately or usefully measuring a change in size of the hydrogel substance contained therein.

Slepian, Unger, and Sutton can generally be grouped together as disclosing vascularly introduced microspheres for the purpose of delivering drug particles or for use as a temporary contrast agent to aid in imaging. In both of these situations, the introduced microspheres serve a temporary purpose and dissolve within the body in a relatively short period of time. The amendment of requiring the change of physical property to be chronically detectable in a repeatable and long-term therapy would therefore distinguish over these references.

The focus of the discussion was on the Lew reference. In paragraph [101] Lew discloses a sizing of 0.2-1 cm on the y-axis, with dimensions in the x- and z-axis being 5 to 10 times smaller. Examiner suggested that such a sizing would make the Lew device capable of implantation into the myocardium, and also capable of delivery through the larger portion of the vascular system, though not deliverable to the microvascular beds in that size configuration. The Applicant proposed amending the language of claim 7 into independent claim 1 to stress the inventive size of 50 micrometers diameter to overcome the Lew reference, but the Examiner finds that such a scaling down of the Lew device would be insufficient evidence without a scientific showing that being of a smaller size and being implanted within the myocardium would make the swelling hydrogel of Lew undetectable by an ultrasound monitor. Examiner pointed to paragraphs [46], [90], and [93] of Lew as contemplating different configurations of the hydrogel as well as different implantation depths and ultrasound frequencies and signal strengths to achieve sufficient resolution to monitor a change in size of the hydrogel implant. An alternative proposal by Applicant is to amend the claims to include limitations regarding the implantable nature of the inventive ultrasound sensor in conjunction with the 50 micrometer microsphere sizing.

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.